CONDITION SURVEY, HUNTER ARMY AIRFIELD SAVANNAH, GEORGIA

R. D. Jackson, et al

Army Engineer Waterways Experiment Station
Vicksburg, Mississippi

March 1972

MISCELLANEOUS PAPER S-72-8

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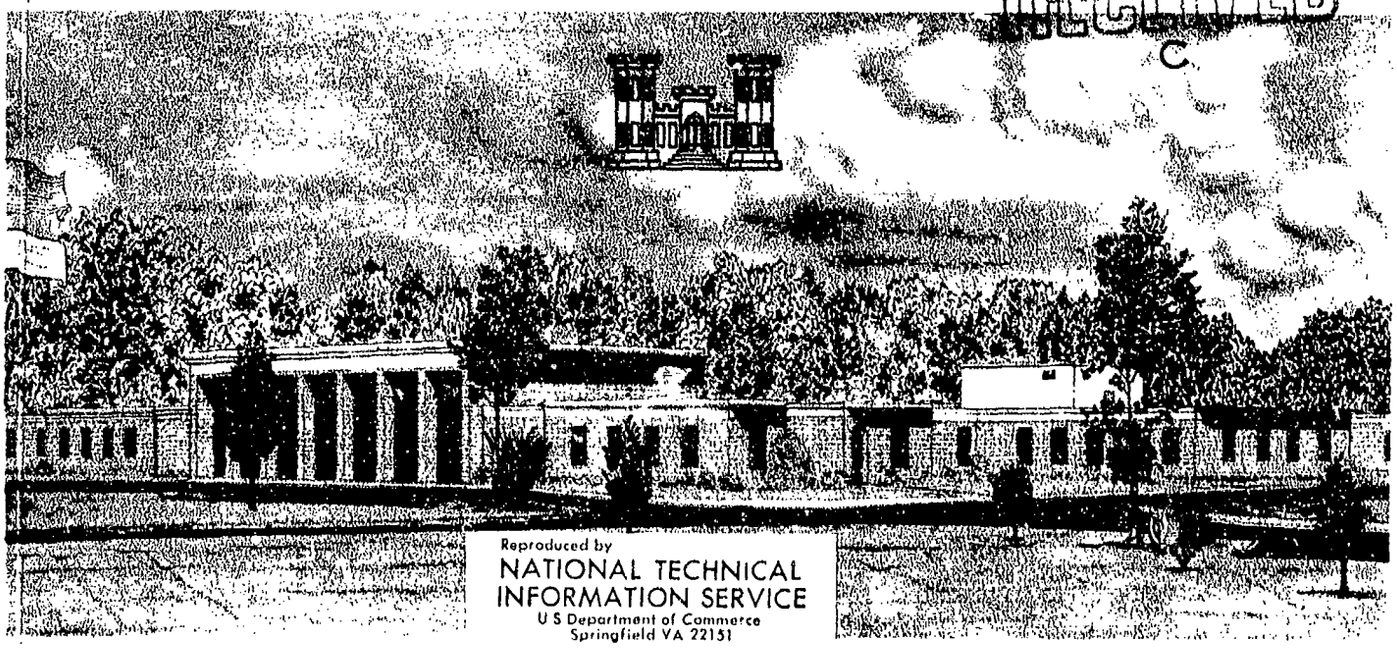

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ARMY-MRC VICKSBURG, MISS

Foreword

Authority for performance of condition surveys at selected airfields is contained in Long Range Program, O&M,A FY 1971, Project Q6-1: "Engineering Criteria for Design and Construction - WES," dated May 1970.

The facilities at Hunter Army Airfield were inspected in March 1971 by Messrs. R. D. Jackson and S. J. Alford of the Flexible Pavement Branch, U. S. Army Engineer Waterways Experiment Station (WES). This report was prepared by Messrs. Jackson and P. J. Vedros under the general supervision of Messrs. J. P. Sale, R. G. Ahlvin, and R. L. Hutchinson of the Soils Division, WES.

COL Ernest D. Peixotto, CE, was Director of the WES during the conduct of the study and preparation of the report. Mr. F. R. Brown was Technical Director.

Contents

Conversion Factors, British to Metric Units of Measurements

British units of measurement used in this report can be converted to metric units as follows:

Multiply	By	To Obtain
inches	2.54	centimeters
feet	0.3048	meters
square inches	6.4516	square centimeters
pounds	0.45359237	kilograms
pounds per square inch	0.6894757	newtons per square centimeter

CONDITION SURVEY, HUNTER ARMY AIRFIELD SAVANNAH, GEORGIA

Purpose

1. The purpose of this report is to present the results of an inspection performed at Hunter Army Airfield (HAAF) in March 1971. The inspection was limited to visual observations, and no tests were conducted on any of the pavement facilities. A layout of the airfield is shown in plate 1.

Pertinent Background Data

General description of airfield

2. HAAF, formerly Hunter Air Force Base, is located in the southwest corner of Savannah, Georgia.

3. The airfield is located physiographically in the Sea Island section of the Coastal Plain province in an area of gently rolling topography. The soil in the area is generally a poorly graded sand, with scattered deposits of fine sand, silt, and lean clay. However, at lower depths occasional pockets of fat clays are found.

4. In March 1971, the airfield facilities consisted of an east-west runway 11,375 ft* long and 200 ft wide, connecting taxiways, parking aprons, two warm-up aprons, former alert aprons and taxiway, and a compass swing base (see plate 1). The taxiways and aprons are of various lengths

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* A table of factors for converting British units of measurements to metric units is presented on page vii.

and widths. Huey-type helicopters were utilizing the large parking apron and the former alert facilities for parking.

Previous reports

5. Previous reports covering the airfield facilities are listed below and pertinent data were extracted from them for use in this condition survey report.

a. Condition survey reports:

(1) U. S. Army Engineer Waterways Experiment Station, CE, "Condition Survey, Hunter Army Airfield, Savannah, Georgia," Miscellaneous Paper S-69-37, August 1969, Vicksburg, Miss.

(2) U. S. Army Rigid Pavement Laboratory, Ohio River Division, CE, "Report of Rigid Pavement Condition Survey, Hunter Air Force Base, Savannah, Georgia," July 1959, Mariemont, Ohio.

(3) U. S. Army Ohio River Division Laboratories, CE, "Report of Rigid Pavement Condition Survey, Hunter Air Force Base, Georgia," October 1956, Mariemont, Ohio.

(4) U. S. Army Ohio River Division Laboratories, CE, "Report of Rigid Pavement Condition Survey, Hunter Air Force Base, Savannah, Georgia," July 1953, Mariemont, Ohio.

(5) U. S. Army Ohio River Division Laboratories, CE, "Report of Rigid Pavement Condition Survey, Hunter Air Force Base, Savannah, Georgia," April 1951, Mariemont, Ohio.

b. Evaluation reports:

(1) U. S. Army Engineer Waterways Experiment Station, CE, "Airfield Pavement Evaluation, Hunter Air Force Base, Savannah, Georgia," Miscellaneous Paper No. 4-379, February 1960, Vicksburg, Miss.

(2) U. S. Army Engineer Waterways Experiment Station, CE, "Airfield Pavement Evaluation, Hunter Air Force Base, Savannah, Georgia," April 1958, Vicksburg, Miss.

(3) U. S. Army, Savannah District, CE, "Airfield Evaluation, Final Report," April 1945, Savannah, Georgia.

History of Airfield Pavements

Construction history

6. The majority of pavement facilities were constructed during the period of years 1941-1959. A summary of the construction history (from the evaluation report, reference 1, paragraph 5b) is shown in table 1. The pavements constructed after 1955 were designed to support a landing gear load of 100,000 lb carried on dual wheels spaced 37.5 in. c-c, each wheel having a tire contact area of 267 sq in. Typical sections of the primary runway and taxiways are shown in plates 2 and 3, respectively. Pavement thickness and other details for all pavement features are shown in the summary of physical property data shown in table 2.

Traffic history

7. During 1967, HAAF was converted from an Air Force to an Army installation. Prior to the change, the pavements were utilized by heavy bomber and cargo-type aircraft. The Army is using the facilities for rotary-wing aircraft used for pilot training. Considerable traffic is recorded for Huey-type helicopters; however, these aircraft have little adverse effect on the pavements, which were designed for heavy loads. The runway and taxiway pavements are generally used for small Army aircraft; however, occasional use is made of the system by transient Air Force heavy-type aircraft.

Condition of Pavement Surfaces

8. A visual inspection of the pavements in March 1971 indicated the airfield pavement to be generally in good condition.

Flexible pavement surfaces

9. The surface of the east-west runway was excellent (photographs 1 and 2). The surfaces of the taxiways, aprons, and holding areas

at taxiways 1 and 5 presented a good appearance. The areas of the taxiways and aprons that were treated with a bituminous coating material in 1967 and 1968 (condition survey report, reference 1, paragraph 5a) showed numerous open cracks and scaling of the coating in some areas (photographs 3-6). A white deposit observed along the cracks in the holding pad at taxiway 5 is shown in photograph 7. The deposit was a fine-grained powder that apparently came from the limerock base course. Asphalt shoulder pavements of the former alert facilities are being utilized by Cobra-type helicopters as parking areas. Considerable deterioration of the pavement has occurred because of fuel spillage (photographs 8 and 9). The shoulder pavements of taxiway 6 had many cracks with vegetation growing in the cracks.

Rigid pavement facilities

10. The rigid pavement facilities condition survey (table 3) revealed that the majority of these pavements were in excellent condition. The pavement of the east apron and the small slabs of the holding pads (former alert parking aprons) were rated good. The defects in the former alert facilities areas probably were developed while they were being utilized by heavy Air Force aircraft. It seems unlikely that helicopters could have caused the defects. The slabs in apron B were in fair condition. Typical defects in this area are shown in photographs 10-14. Photograph 14 shows fuel stains at a Huey parking spot on the west apron.

Airfield Maintenance

Recent maintenance

11. During 1970 the asphalt portion of the east-west runway was heater planed to remove the oxidized pavement surface. It was then rolled and a slurry seal was applied.

Planned maintenance

12. Maintenance scheduled for rigid pavement facilities during 1971 included replacing shattered slabs, cleaning and repairing cracks in broken slabs, and applying joint sealer to a large portion of the east apron and apron B. After such maintenance, these areas should be in good condition. Maintenance planned for the flexible pavements during 1971 was slurry-sealing of taxiways 1-3 and the holding area adjacent to taxiway 1. Also, the shoulder pavements of taxiway 6 were to be removed and replaced with hot-mix asphaltic concrete. An overlay of the flexible pavement of the overrun area at both ends of the east-west runway is planned for FY 1972.

Evaluation

13. The evaluation of the load-carrying capacity of the HAAF pavements was based on criteria contained in TM 5-827-2 and TM 5-827-3, "Flexible Airfield Pavement Evaluation," and "Rigid Airfield Pavement Evaluation," respectively, and on the strength values assigned for the 1960 evaluation. Evaluations are shown in table 4 for four life categories of airfield pavements and various types of landing gear wheel assemblies. An aircraft identification index is presented in table 5, which lists the various types of aircraft according to landing gear configurations.

Table 1

Construction History

Facility	Length ft	Width ft	Pavement Thickness in.	Pavement Type	Construction Period	Construction Agency
E-W runway						
Sta 0+00-105+00	10,500	200	4	AC	1951-1952	CE
Sta 95+00-105+00 (strengthened)	1,000	200	2	AC	1955-1956	CE
Sta 105+00-113+75	875	200	15	PCC	1955-1956	CE
Sta 0+00-3+00	300	200	19-22	PCC	1957	IE
Sta 3+00-105+00 (strengthened)	10,200	200	1	AC	1959	IE
Alert aprons and twy			20	PCC	1959	CE
Taxiway 6	1,300±	75	18	PCC	1957	CE
Taxiway 5						
Original	5,400±	100	4	AC	1951-1952	CE
Sta 62+50-83+00 (strengthened)	2,050	80	1-1/2	AC	1959	IE
Taxiway 1	1,670±	75	4	AC	1951-1952	CE
Taxiway 4	670±	75	4	AC	1951-1952	CE
Taxiway 3						
Southwest end	630±	75	4	AC	1951-1952	CE
Northeast end	2,200±	150	6	PCC	1941	CE
Strengthened	2,200±	150	4	AC	1952-1953	CE
Taxiway 2						
Southeast end	970±	75	4	AC	1951-1952	CE
Northwest end	900±	150	6	PCC	1941	CE
Strengthened	900±	150	4	AC	1952-1953	CE
E-W taxiway						
Original	5,300	150	6	PCC	1941	CE
Strengthened	5,300	150	4	AC	1952-1953	CE
Hangar aprons			13	PCC	1953-1954	CE
Compass swing base			15	PCC	1953-1954	CE
West apron			15	PCC	1953-1954	CE
Apron B			6	PCC	1942	CE
East apron						
Original			6	PCC	1942	CE
Strengthened			11	PCC	1955-1956	CE
North apron			15	PCC	1955-1956	CE
South apron			15	PCC	1953-1954	CE
Apron A			15	PCC	1953	CE

Table

Surface Characteristics Data

FACILITY			OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		GENERAL CONDITION OF AREA CONSIDERED
FACILITY NUMBER AND IDENTIFICATION	LENGTH FT	WIDTH FT	THICK IN.	DESCRIPTION	FLEX. STR PSI	THICK IN	DESCRIPTION	FLEX. STR PSI	THICK IN	CLASSIFICATION	CBR OR K	CLASSIFICATION	CBR OR K	
E-W runway														
Sta 0+00 to 3+00	300	200				17 to 22	Portland-cement concrete	750				Sand	300	
Sta 3+00 to 11+00	800	200	1	Asphaltic concrete		4	Asphaltic concrete		6 8	Limerock base Subbase	80 40	Sand	25	
Sta 11+00 to 95+00	8400	200	1	Asphaltic concrete		4	Asphaltic concrete		6 8	Limerock base Subbase	80 40	Sand	25	
Sta 95+00 to 105+00	1000	200	3	Asphaltic concrete		4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Sta 105+00 to 113+75	875	200				15	Portland-cement concrete	730				Sand	300	
Taxiway 6	1300±	75				18	Portland-cement concrete	735				Sand	300	
Taxiway 1	1670±	75				4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Taxiway 4	670±	75				4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Taxiway 5														
Sta 62+50 to 83+00	2050	80	1-1/2	Asphaltic concrete		4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Original	5400±	100				4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Taxiway 2														
Southeast end	970±	75				4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Northwest end	900±	150	7	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350	
Taxiway 3														
Southwest end	630±	75				4	Asphaltic concrete		8 8	Limerock base Subbase	80 40	Sand	25	
Northeast end	2200±	150	7	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350	
E-W taxiway	4300	150	7	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350	
Hangar aprons						13	Portland-cement concrete	730				Sand	300	
Alert aprons and taxiway						20	Portland-cement concrete	800				Sand	225	
North apron						15	Portland-cement concrete	730				Sand	300	
South apron						15	Portland-cement concrete	730				Sand	300	

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(Continued)

(1 of 2 sheets)

FACILITY			OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		GENERAL CONDITION OF AREA CONSIDERED
FACILITY NUMBER AND IDENTIFICATION	LENGTH FT	WIDTH FT	THICK. IN	DESCRIPTION	FLEX. STR PSI	THICK IN	DESCRIPTION	FLEX STR PSI	THICK. IN.	CLASSIFICATION	CBR OR K	CLASSIFICATION	CBR OR K	
West apron						15	Portland-cement concrete	730				Sand	350	
Compass-swing base						15	Portland-cement concrete	730				Sand	350	
East apron	1400	Var	11	Portland-cement concrete	730	6	Portland-cement concrete	650				Sand	350	
Apron area Apron extensions						4	Asphaltic concrete		6 8	Waterbound macadam Subbase	80 40	Sand	25	
Portion of old NW-SE runway	2200±	150	4	Asphaltic concrete		6	Asphaltic concrete					Sand	24	
Portion of old NE-SW runway	700	150	4	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350	
Apron A						15	Portland-cement concrete	730				Sand	350	
Apron B						6	Portland-cement concrete	650				Sand	350	

DATE: [illegible]	SUMMARY OF DATA – RIGID PAVEMENT CONDITION SURVEY																	AIRFIELD: [illegible]		
FEATURE	SLAB SIZE FT	APPROX NO OF SLABS	PAVE THICK IN	NO. OF SLABS CONTAINING INDICATED DEFECTS														% OF SLABS NO DEFECTS	% OF SLABS NO MAJOR DEFECTS	CONDITION
				|	—	\	Δ	✳	∿	S	J	⊥	ꟻ	⌖	M	P	O			
North apron	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	Excellent
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]				[illegible]	[illegible]						[illegible]	[illegible]	[illegible]
South apron	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]						[illegible]	[illegible]	[illegible]	[illegible]
[illegible] apron	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Apron [illegible]	12.5 by 25	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Apron A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Excellent
Runway east	25 by 25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Excellent
Runway west	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]		[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Excellent

REMARKS: [illegible]

LEGEND:

|	LONGITUDINAL CRACK	∿	SHRINKAGE CRACK	⌖	SETTLEMENT
—	TRANSVERSE CRACK	S	SCALING	M	MAP CRACKING
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	P	PUMPING JOINT
Δ	CORNER BREAK	⊥	SPALL ON LONGITUDINAL JOINT	O	POP OUT
✳	SHATTERED SLAB	ꟻ	CORNER SPALL		

DATE:

SUMMARY OF DATA — RIGID PAVEMENT CONDITION SURVEY

AIRFIELD

FEATURE	SLAB SIZE FT	APPROX NO OF SLABS	PAVE THICK IN	NO OF SLABS CONTAINING INDICATED DEFECTS														% OF SLABS W/ DEFECTS	% OF SLABS W/ MAJOR DEFECTS	COND * (%)
				|	—	\	Δ	✳	~	S	J	⊥	⌐	⊕	M	P	O			

REMARKS:

LEGEND:

|	LONGITUDINAL CRACK	~	SHRINKAGE CRACK	⊕	SETTLEMENT
—	TRANSVERSE CRACK	S	SCALING	M	MAP CRACKING
\	DIAGONAL CRACK	J	SPALL ON TRANSVERSE JOINT	P	PUMPING JOINT
Δ	CORNER BREAK	⊥	SPALL ON LONGITUDINAL JOINT	O	POP OUT
✳	SHATTERED SLAB	⌐	CORNER SPALL		

Table 4

SUMMARY OF PAVEMENT EVALUATION

FACILITY			TEST PIT NO.	OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		LOAD CA		
IDENTIFICATION	LENGTH FT	WIDTH FT		THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	DESCRIPTION	FLEX. STR PSI	THICK. IN.	DESCRIPTION	CBR	CLASSIFICATION	CBR	CATEGORY OF PAVEMENT LIFE AND OPERATIONAL USE	SINGLE 100 PSI TIRE PRESSURE	SINGLE 100 SQ IN. CONTACT ARE
E-W runway Sta 0+00 to 3+00 A		Selected figures		for evaluation			22	Portland-cement concrete	750				Sand	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Sta 3+00 to 11+00 Q	Selected figures for evaluation			1	Asphaltic concrete		4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Sta 11+00 to 95+00 K				1	Asphaltic concrete		4	Asphaltic concrete		6 8	Limerock Subbase	80 40	Sand	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Sta 95+00 to 105+00 J	Selected figures for evaluation			3	Asphaltic concrete		4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Sta 105+00 to 113+75 E	Selected figures for evaluation						15	Portland-cement concrete	730				Sand	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Taxiway 6 D	Selected figures for evaluation						18	Portland-cement concrete	735				Sand	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Taxiway 1 and 5 Original I	Selected figures for evaluation						4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 50,000
Sta 62+50 to 83+00 P	Selected figures for evaluation			1-1/2	Asphaltic concrete		4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Taxiway 4 I	Selected figures for evaluation						4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
Taxiway 3 Original I	Selected figures for evaluation						4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25			
NE end L				7	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 115,000	65,000+ 65,000+ 65,000+ 65,000+
Taxiway 2 Original I	Selected figures for evaluation						4	Asphaltic concrete		8 8	Limerock Subbase	80 40	Sand	25			
NE end	Selected figures for evaluation			7	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 115,000	65,000+ 65,000+ 65,000+ 65,000+
[illegible]	[illegible]			7	Asphaltic concrete		6	Portland-cement concrete	650				Sand	350			
[illegible]	[illegible]						15	Portland-cement concrete	730				Sand	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+
[illegible]		[illegible]		for evaluation			13	Portland-cement concrete	730				Sand	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 135,000	65,000+ 65,000+ 65,000+ 65,000+

Table 1

SUMMARY OF PAVEMENT EVALUATION

SUBGRADE		LOAD CARRYING CAPACITY IN LB OF GROSS PLANE LOAD FOR INDICATED LANDING GEAR TYPES AND CONFIGURATIONS AND LIFE CATEGORIES											TRAFFIC AREA
			TRICYCLE ARRANGEMENT									BICYCLE	
CLASSIFICATION	CBR &	CATEGORY OF PAVEMENT LIFE AND OPERATIONAL USE	SINGLE 12" PSI TIRE PRESSURE	SINGLE 105 SQ IN CONTACT AREA	SINGLE 247 SQ IN CONTACT AREA	TWIN 22" C-C 326 SQ IN CONTACT AREA EACH TIRE	SINGLE TANDEM 60" SPACING 400 SQ IN CONTACT AREA	TWIN 37" C-C 247 SQ IN CONTACT AREA EACH TIRE	TWIN 45" C-C 490 SQ IN CONTACT AREA EACH TIRE	TWIN TANDEM 33" x 48" 208 SQ IN CONTACT AREA EACH TIRE	C-17A GEAR CONFIGURATION	TWIN TWIN SPACED 37" x 54" 247 SQ IN CONTACT AREA EACH TIRE	
nd	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 220,000+	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 330,000+	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 600,000+ 600,000+	A
nd	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 185,000	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 250,000+	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 500,000 390,000	B
nd	20	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 200,000	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 250,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 580,000 440,000	C
nd	20	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 220,000+	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 330,000+	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 600,000+ 600,000	C
nd	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 220,000+	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 295,000+ 230,000+	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 500,000 430,000 360,000	A
nd	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 220,000+	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 310,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 560,000 470,000	A
nd	25	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 50,000	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 155,000	200,000+ 200,000+ 200,000 180,000	330,000+ 320,000 210,000 170,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 280,000	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 470,000 370,000 350,000	A
nd	20	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 200,000	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 270,000 220,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 360,000	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 530,000 400,000 380,000	A
nd	20	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 155,000	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 220,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 600,000 500,000	C
nd	20	Evaluation same as shown previously for taxiway 4											C
nd	300	Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 115,000	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 175,000+	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 265,000 180,000 145,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 360,000 290,000	770,000+ 770,000+ 750,000 600,000	600,000+ 410,000 275,000 245,000	A
nd	25	Evaluation same as shown previously for taxiway 4											C
		Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 115,000	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 175,000	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 290,000 230,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 410,000 370,000	C
		Evaluation same as shown previously for taxiway 3, NE end											A
		Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 155,000+	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 220,000+	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 320,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 600,000+ 500,000	C
		Emergency Minimum Full Capacity	155,000+ 155,000+ 155,000+ 135,000	65,000+ 65,000+ 65,000+ 65,000+	95,000+ 95,000+ 95,000+ 95,000+	220,000+ 220,000+ 220,000+ 200,000	200,000+ 200,000+ 200,000+ 200,000+	330,000+ 330,000+ 330,000+ 260,000	230,000+ 230,000+ 230,000+ 230,000+	380,000+ 380,000+ 380,000+ 380,000+	770,000+ 770,000+ 770,000+ 770,000+	600,000+ 600,000+ 575,000 415,000	C

[illegible]

Note: A plus sign denotes allowable gross loading greater than the maximum gross weight of any existing aircraft having indicated gear configuration. [illegible] loading is less than the minimum gross weight of any existing aircraft having [illegible] gear configuration.

Table 4 (Concluded)

FACILITY			TEST PIT NO	OVERLAY PAVEMENT			PAVEMENT			BASE			SUBGRADE		LOAD CARRYING
IDENTIFICATION	LENGTH FT	WIDTH FT		THICK IN	DESCRIPTION	FLEX STR PSI	THICK IN	DESCRIPTION	FLEX STR PSI	THICK IN	DESCRIPTION	CBR	CLASSIFICATION	CBR	CATEGORY OF PAVEMENT LIFE AND OPERATIONAL USE	SINGLE 100 PSI TIRE PRESSURE	SINGLE 100 SQ IN CONTACT AREA
East Apron															Emergency	155,000+	65,000+
	Selected figures for evaluation														Minimum	155,000+	65,000+
H			11	Portland-cement concrete	730	6	Portland-cement concrete c = 0.75	650					Sand	350	Full	155,000+	65,000+
															Capacity	150,000	65,000+
Taxiway 7 and 9															Emergency	155,000+	65,000+
															Minimum	155,000+	65,000+
	Selected figures for evaluation														Full	155,000+	65,000+
B							20	Portland-cement concrete	800				Sand	225	Capacity	155,000+	65,000+
Apron Area															Emergency	155,000+	65,000+
															Minimum	155,000+	65,000+
	Selected figures for evaluation														Full	155,000+	65,000+
M							4	Asphaltic concrete		6	Waterbound macadam	80					
										8	Subbase	40	Sand	25	Capacity	155,000+	65,000+
Apron Area															Emergency	155,000+	65,000+
															Minimum	155,000+	65,000+
	Selected figures for evaluation														Full	155,000+	65,000+
N			4	Asphaltic concrete		6	Asphaltic concrete						Sand	25	Capacity	120,000	65,000+
															Emergency	155,000+	65,000+
							ET 10.7								Minimum	155,000+	65,000+
	Selected figures for evaluation														Full	145,000	65,000+
O			4	Asphaltic concrete		6	Portland-cement concrete	650					Sand	350	Capacity	90,000	65,000+
Apron B															Emergency	150,000	65,000+
															Minimum	110,000	65,000+
	Selected figures for evaluation														Full	85,000	60,000
S							6	Portland-cement concrete	650				Sand	350	Capacity	55,000	40,000

Table 1 (Concluded)

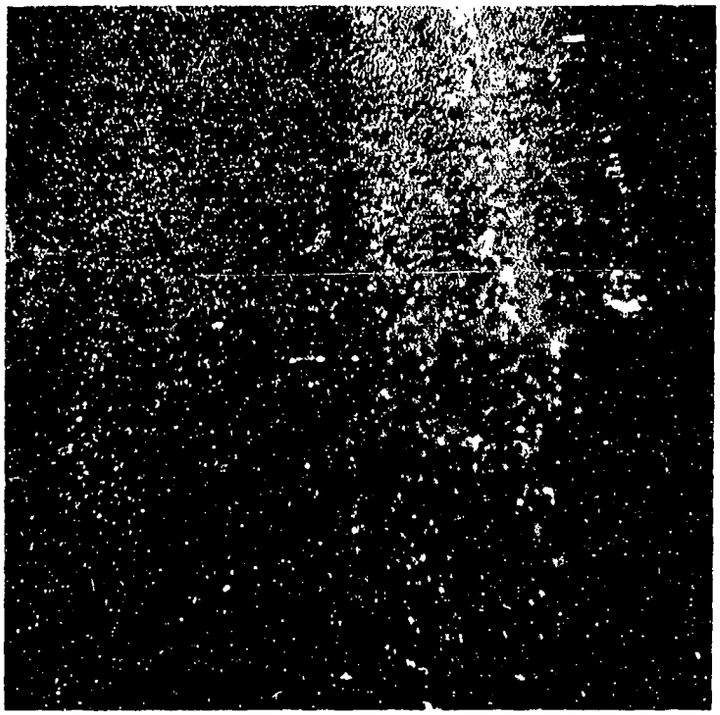
SUBGRADE		LOAD CARRYING CAPACITY IN LB OF GROSS PLANE LOAD FOR INDICATED LANDING GEAR TYPES AND CONFIGURATIONS AND LIFE CATEGORIES											TRAFFIC AREA
			TRICYCLE ARRANGEMENT									DUAL CYCLE	
CLASSIFICATION	CBR	CATEGORY OF PAVEMENT LIFE AND OPERATIONAL USE	SINGLE 75 PSI TIRE PRESSURE	SINGLE 130 SQ IN CONTACT AREA	SINGLE 201 SQ IN CONTACT AREA	TWIN 30 C C 440 SQ IN CONTACT AREA EACH TIRE	SINGLE TANDEM 60 SPACING 690 SQ IN CONTACT AREA	TWIN 37 C C 297 SQ IN CONTACT AREA EACH TIRE	TWIN 66 C C 510 SQ IN CONTACT AREA EACH TIRE	TWIN TANDEM 33 X 66 848 SQ IN CONTACT AREA EACH TIRE	C 5A 6 BAR CONFIGURATION	TWIN TWIN SPACED 21 62 37 257 SQ IN CONTACT AREA EACH TIRE	
		Emergency	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Minimum	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Full	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
Sand	350	Capacity	150,000	65,000+	95,000+	220,000+	200,000+	295,000	230,000+	380,000+	770,000+	470,000	C
		Emergency	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Minimum	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Full	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
Sand	225	Capacity	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	560,000	B
		Emergency	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000	770,000+	600,000+	
		Minimum	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Full	155,000+	65,000+	95,000+	220,000+	200,000+	310,000	230,000+	380,000+	770,000+	500,000	
Sand	25	Capacity	155,000+	65,000+	95,000+	155,000	200,000+	220,000	230,000+	380,000+	770,000+	410,000	C
		Emergency	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Minimum	155,000+	65,000+	95,000+	220,000+	200,000+	310,000	230,000+	380,000+	770,000+	420,000	
		Full	155,000+	65,000+	95,000+	150,000	200,000+	250,000	230,000+	330,000	770,000+	(a)	
Sand	25	Capacity	120,000	65,000+	85,000	120,000	200,000+	180,000	230,000+	270,000	770,000+	(a)	C
		Emergency	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	600,000+	
		Minimum	155,000+	65,000+	95,000+	220,000+	200,000+	330,000+	230,000+	380,000+	770,000+	500,000	
		Full	145,000	65,000+	95,000+	215,000	200,000+	235,000	230,000+	380,000+	770,000+	340,000	
Sand	350	Capacity	90,000	65,000+	95,000	140,000	200,000+	190,000	230,000+	380,000+	770,000+	305,000	C
		Emergency	150,000	65,000+	95,000+	220,000	200,000+	200,000	230,000+	380,000+	770,000+	350,000	
		Minimum	110,000	65,000+	85,000	160,000	200,000+	150,000	230,000+	320,000	770,000+	270,000	
		Full	85,000	60,000	65,000	125,000	185,000	115,000	210,000	260,000	730,000	(a)	
Soil	350	Capacity	55,000	40,000	45,000	85,000	135,000	80,000	155,000	190,000	525,000	(a)	C

Note: A plus sign denotes allowable gross loading greater than the maximum gross weight of any existing aircraft having indicated gear configuration. (a) denotes allowable gross loading is less than the minimum gross weight of any existing aircraft having indicated gear configuration.

Table 5

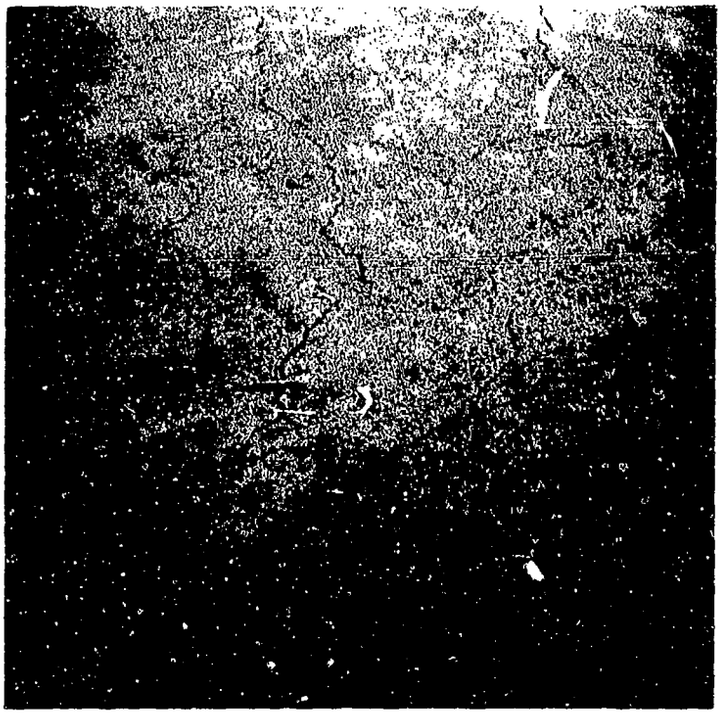
Aircraft Identification Index
(For Gear Configurations Shown in Columns 1-10, Table 4)

1	2	3	4	5	6	7	8	9	10
B-26-B	B-45-C	F-111	C-119	C-130		C-124	C-133	C-5A	B-52
B-45-A	F-84-F		C-54-G		B-50		C-135		B-52-A
B-57-B	F-84-G		C-118		KC-97		KC-135		
B-66-C	F-86-D		C-131		C-74		C-141		
C-45-F	F-86-F				C-121		KC-137		
C-45-G	F-86-H								
C-46-F	F-89 Series								
C-82	F-100-A								
C-123-B	F-101-A								
F-86-A	F-102								
F-86-E	C-47								
F-94-B	B-57								

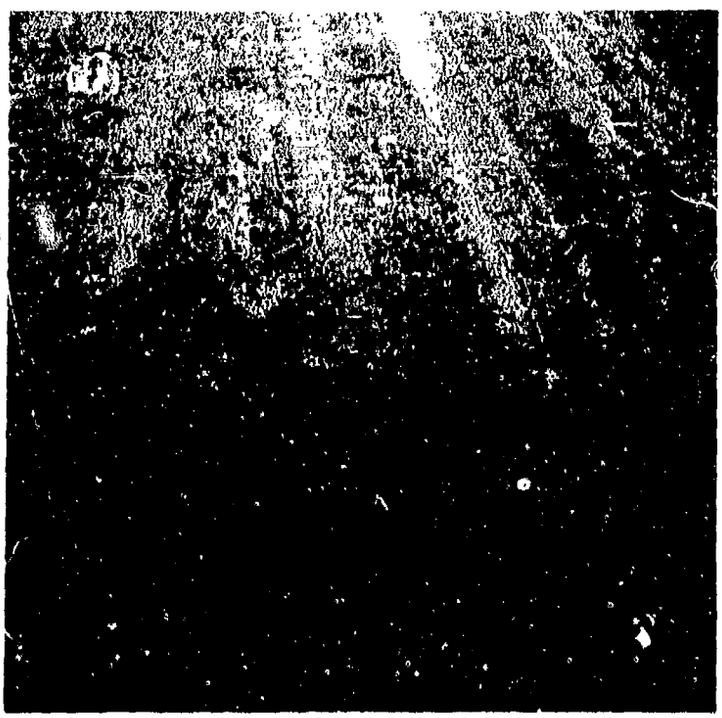


Photograph 1. Surface typical of asphalt portion of east-west runway

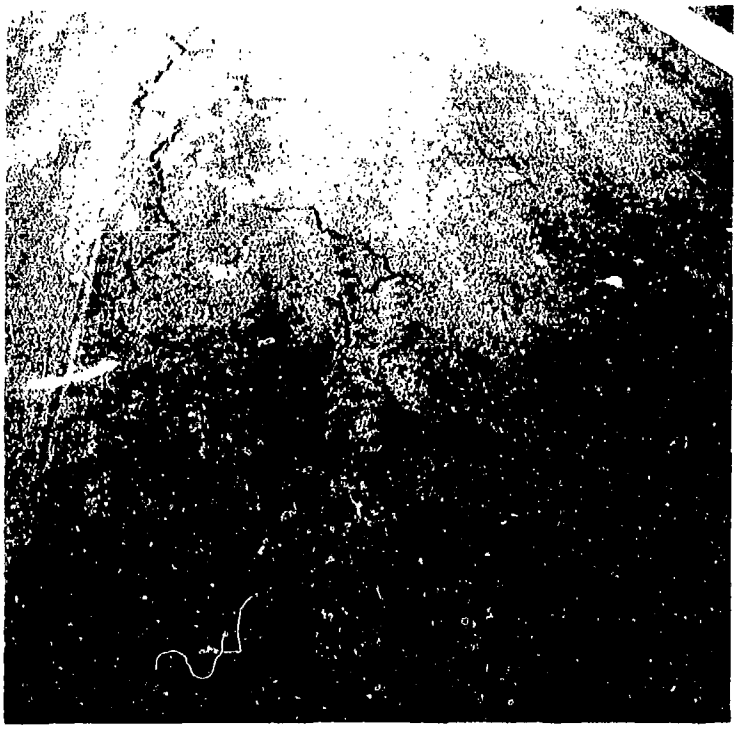
Photograph 2. Closeup view of slurry seal on east-west runway



Photograph 3. Open cracks near east end of the asphalt apron

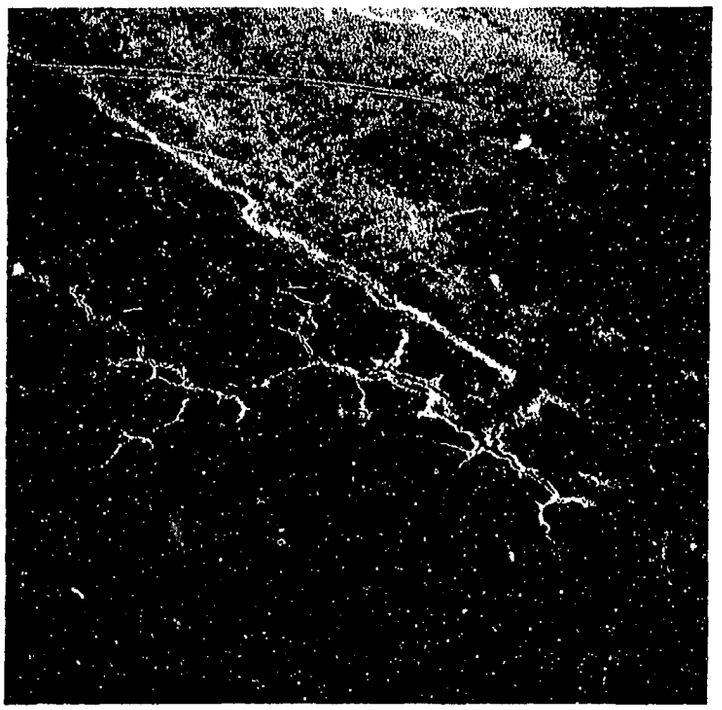


Photograph 4. Longitudinal cracks in taxiway 4



Photograph 5. Random cracking, taxiway 5

Photograph 6. Scaling of bituminous seal, east apron area



Photograph 7. White powdery substance along cracks in pavement of holding area at taxiway 5

Photograph 8. Effects of fuel spillage on shoulder pavements of former alert area

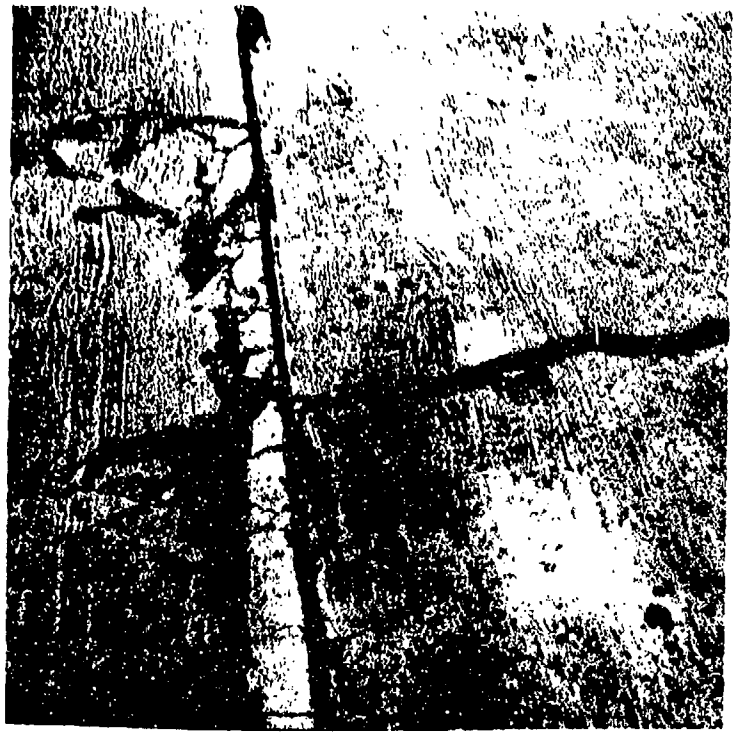
Photograph 9. Ruts in fuel spillage area on shoulder pavements of former alert area

Photograph 10. Shattered slab in apron B

Photograph 11. Spall along transverse crack, apron B

Photograph 12. Corner break of slab, apron B

Photograph 13. Typical popout in rigid pavement, apron B



Photograph 14. Spalling along longitudinal joint, apron B

Photograph 15. Fuel stains at Huey parking spot, west apron

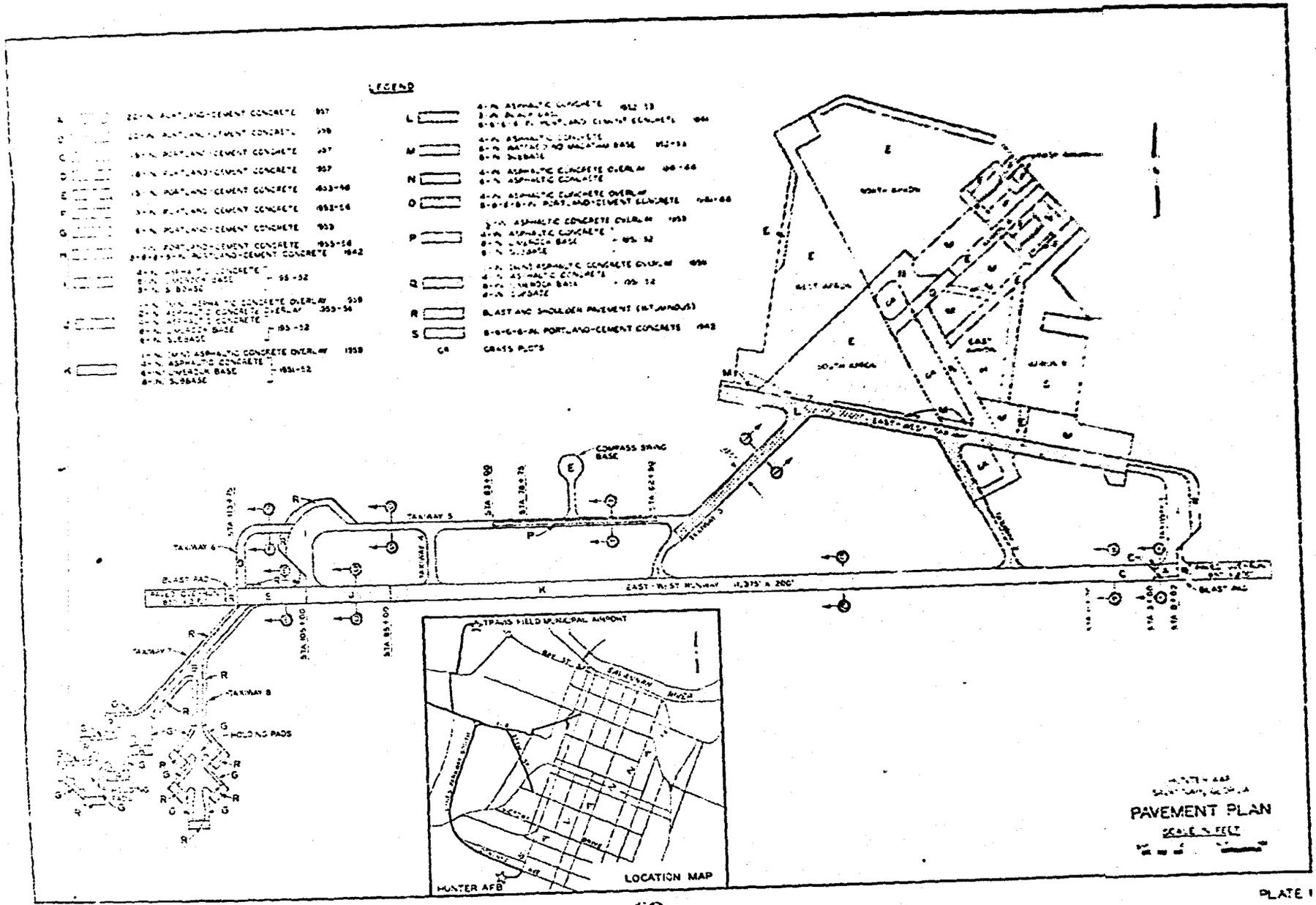
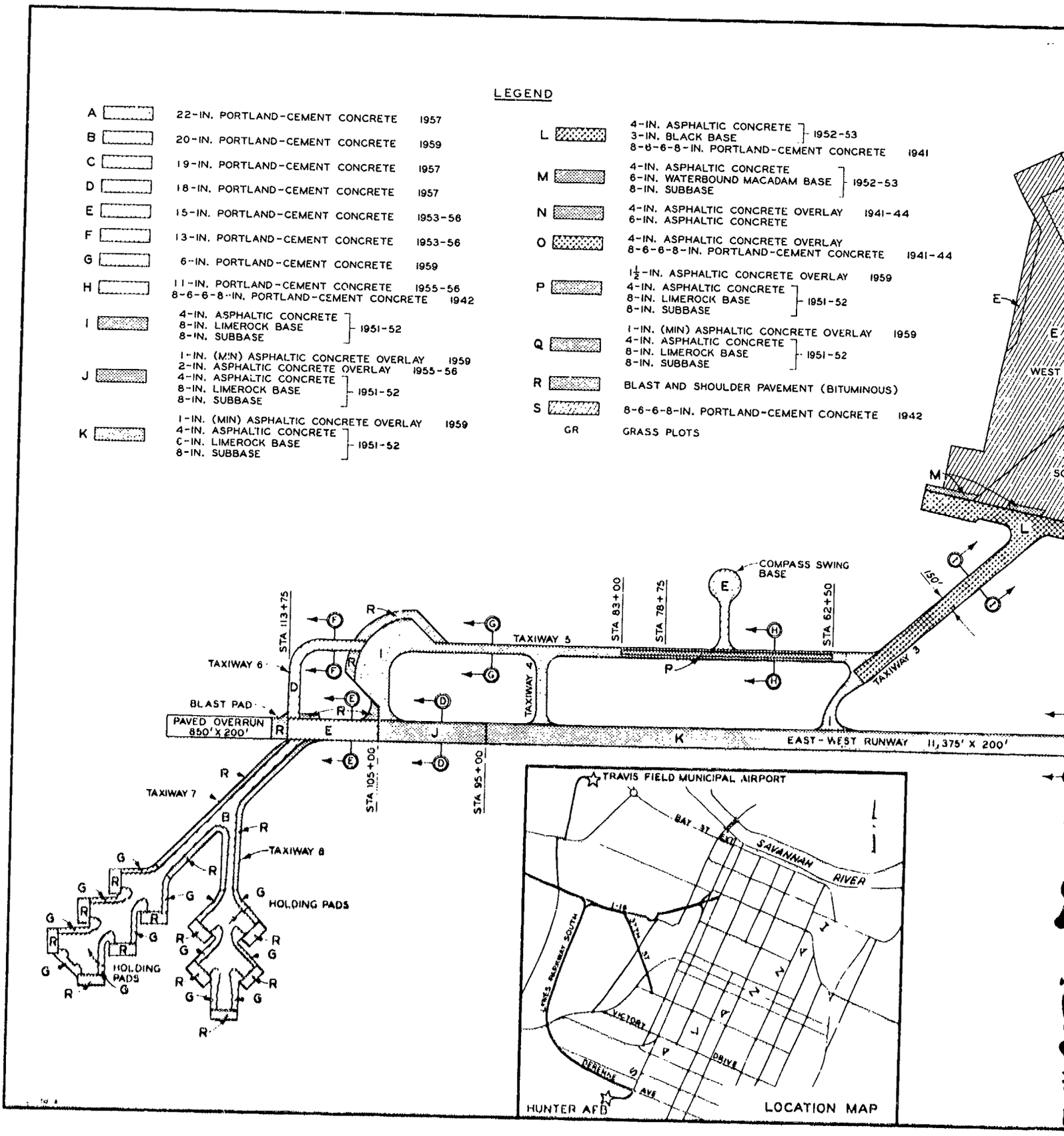

LEGEND
L
M
N
O
P
Q
R
S
GR GRASS PLOTS
COMPASS SWING BASE
TAXIWAY 5
TAXIWAY 6
TAXIWAY 7
TAXIWAY 8
TAXIWAY A
TAXIWAY D
BLAST PAD
EAST - WEST RUNWAY 11,375' x 200'
HOLDING PADS
TRANS FIELD MUNICIPAL AIRPORT
LOCATION MAP
HUNTER AFB
PAVEMENT PLAN

PLATE 1


LEGEND
A 22-IN. PORTLAND-CEMENT CONCRETE 1957
B 20-IN. PORTLAND-CEMENT CONCRETE 1959
C 19-IN. PORTLAND-CEMENT CONCRETE 1957
D 18-IN. PORTLAND-CEMENT CONCRETE 1957
E 15-IN. PORTLAND-CEMENT CONCRETE 1953-56
F 13-IN. PORTLAND-CEMENT CONCRETE 1953-56
G 6-IN. PORTLAND-CEMENT CONCRETE 1959
H 11-IN. PORTLAND-CEMENT CONCRETE 1955-56
8-6-6-8-IN. PORTLAND-CEMENT CONCRETE 1942
I 4-IN. ASPHALTIC CONCRETE
8-IN. LIMEROCK BASE
8-IN. SUBBASE 1951-52
J 1-IN. (MIN) ASPHALTIC CONCRETE OVERLAY 1959
2-IN. ASPHALTIC CONCRETE OVERLAY 1955-56
4-IN. ASPHALTIC CONCRETE
8-IN. LIMEROCK BASE
8-IN. SUBBASE 1951-52
K 1-IN. (MIN) ASPHALTIC CONCRETE OVERLAY 1959
4-IN. ASPHALTIC CONCRETE
8-IN. LIMEROCK BASE
8-IN. SUBBASE 1951-52
L 4-IN. ASPHALTIC CONCRETE
3-IN. BLACK BASE 1952-53
8-6-6-8-IN. PORTLAND-CEMENT CONCRETE 1941
M 4-IN. ASPHALTIC CONCRETE
6-IN. WATERBOUND MACADAM BASE 1952-53
8-IN. SUBBASE
N 4-IN. ASPHALTIC CONCRETE OVERLAY 1941-44
6-IN. ASPHALTIC CONCRETE
O 4-IN. ASPHALTIC CONCRETE OVERLAY
8-6-6-8-IN. PORTLAND-CEMENT CONCRETE 1941-44
P 1½-IN. ASPHALTIC CONCRETE OVERLAY 1959
4-IN. ASPHALTIC CONCRETE
8-IN. LIMEROCK BASE
8-IN. SUBBASE 1951-52
Q 1-IN. (MIN) ASPHALTIC CONCRETE OVERLAY 1959
4-IN. ASPHALTIC CONCRETE
8-IN. LIMEROCK BASE
8-IN. SUBBASE 1951-52
R BLAST AND SHOULDER PAVEMENT (BITUMINOUS)
S 8-6-6-8-IN. PORTLAND-CEMENT CONCRETE 1942
GR GRASS PLOTS
COMPASS SWING BASE
STA 113+75
STA 83+00
STA 78+75
STA 62+50
STA 105+00
STA 95+00
TAXIWAY 5
TAXIWAY 6
TAXIWAY 4
TAXIWAY 3
TAXIWAY 7
TAXIWAY 8
BLAST PAD
PAVED OVERRUN 850' X 200'
EAST-WEST RUNWAY 11,375' X 200'
HOLDING PADS
HOLDING PADS
150'
WEST
TRAVIS FIELD MUNICIPAL AIRPORT
BAY ST
EXT
SAVANNAH
RIVER
LINES PARKWAY SOUTH
34TH ST
VICTORY
DRIVE
DEFENSE
AVE
HUNTER AFB
LOCATION MAP

-IN. ASPHALTIC CONCRETE] 1952-53
-IN. BLACK BASE]
6-6-8-IN. PORTLAND-CEMENT CONCRETE 1941

-IN. ASPHALTIC CONCRETE]
-IN. WATERBOUND MACADAM BASE] 1952-53
-IN. SUBBASE]

IN. ASPHALTIC CONCRETE OVERLAY 1941-44
-IN. ASPHALTIC CONCRETE

-IN. ASPHALTIC CONCRETE OVERLAY
6-6-8-IN. PORTLAND-CEMENT CONCRETE 1941-44

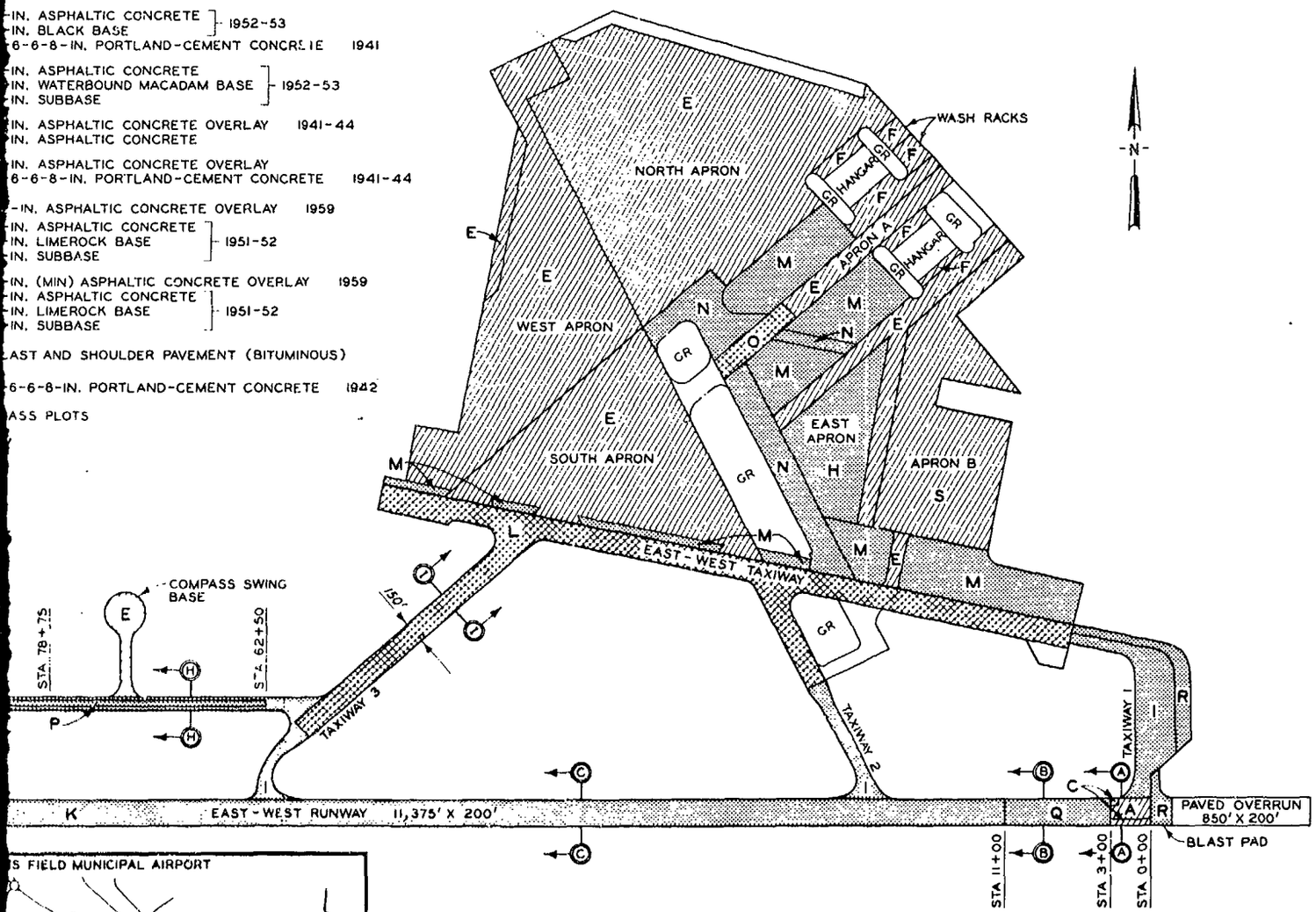
-IN. ASPHALTIC CONCRETE OVERLAY 1959
-IN. ASPHALTIC CONCRETE]
-IN. LIMEROCK BASE] 1951-52
-IN. SUBBASE]

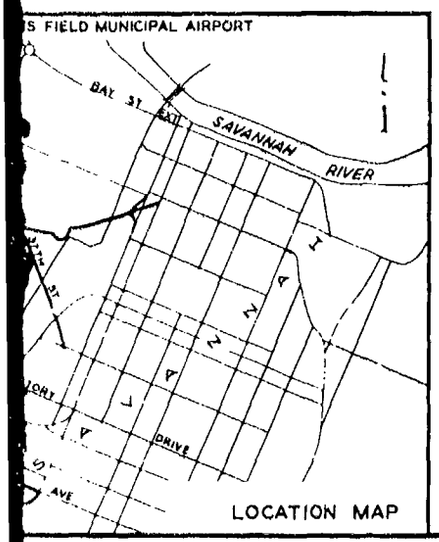
-IN. (MIN) ASPHALTIC CONCRETE OVERLAY 1959
-IN. ASPHALTIC CONCRETE]
-IN. LIMEROCK BASE] 1951-52
-IN. SUBBASE]

AST AND SHOULDER PAVEMENT (BITUMINOUS)

6-6-8-IN. PORTLAND-CEMENT CONCRETE 1942

ASS PLOTS





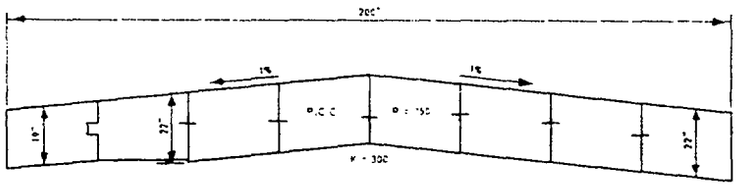
HUNTER AAF
SAVANNAH, GEORGIA

PAVEMENT PLAN

SCALE IN FEET

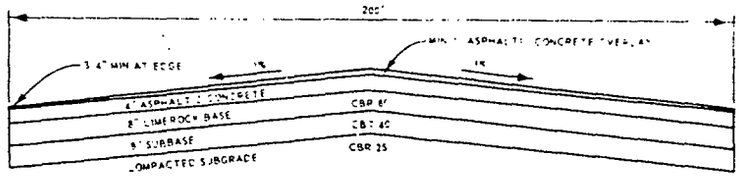
500 0 500 1000

PLATE I



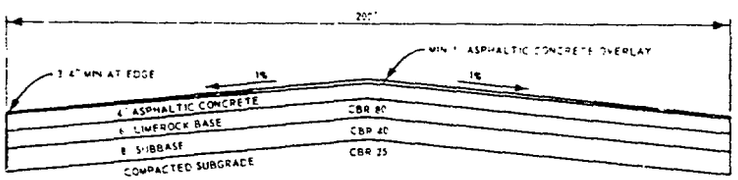
SECTION A-A

STA 0+00 TO 3+00



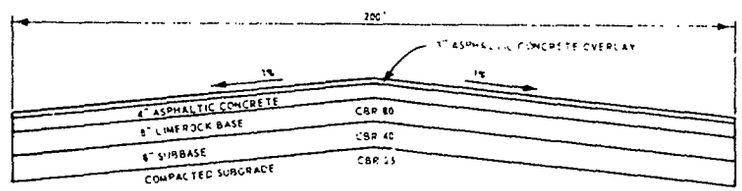
SECTION B-B

STA 3+00 TO 11+00



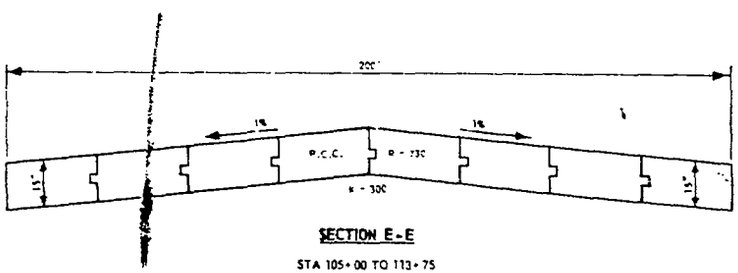
SECTION C-C

STA 11+00 TO 95+00



SECTION D-D

STA 95+00 TO 105+00



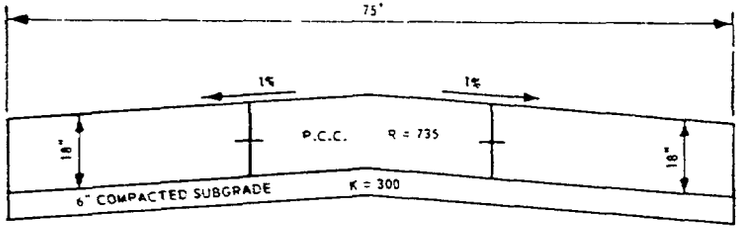
SECTION E-E

STA 105+00 TO 113+75

TYPICAL PAVEMENT AND FOUNDATION SECTIONS
EAST-WEST RUNWAY

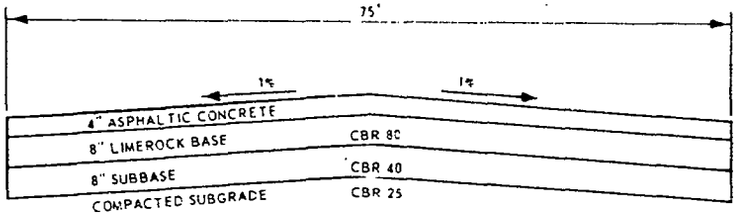
011160-C

PLATE 3



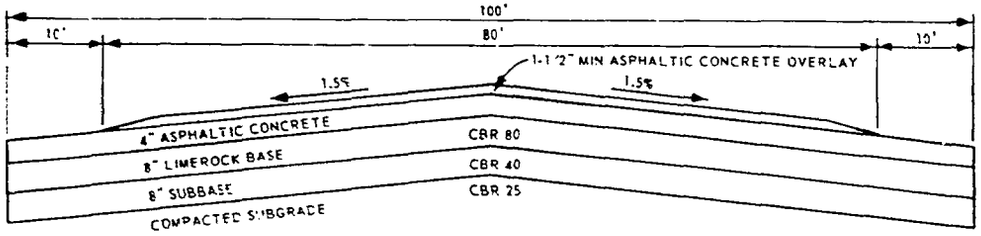
SECTION F-F

TAXIWAY 6



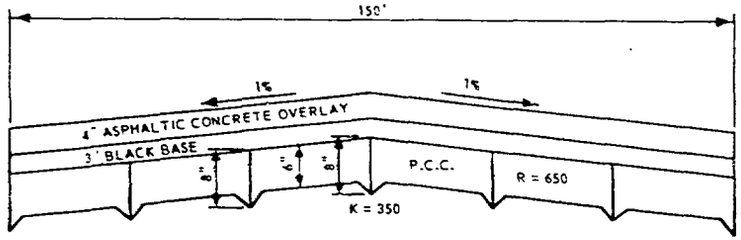
SECTION G-G

TAXIWAYS 1 AND 5



SECTION H-H

TAXIWAY 5 - STA 62+50 TO 83+00



SECTION I-I

TAXIWAY 3 AND EAST-WEST TAXIWAY

TYPICAL PAVEMENT AND FOUNDATION SECTIONS

TAXIWAYS

01180-D